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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,783	03/30/2004	Henrik S. Klint	10921/27	5211
7590 Richard E. Stanley, Jr. BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			EXAMINER WOO, JULIAN W	
			ART UNIT 3731	PAPER NUMBER
			MAIL DATE 06/12/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/813,783	Applicant(s) KLINT ET AL.	
	Examiner Julian W. Woo	Art Unit 3731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 21, 2007 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 5, 7, 9, 10, and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Kupiecki et al. (4,994,069). Kupiecki et al. disclose, at least in figures 1-8 and in col. 4, line 40 to col. 5 line 16; col. 7, lines 7-25; and col. 9, line 13 to col. 10, line 54; a method for endovascular occlusion of a blood vessel area (70) or vessel lumen, where the method includes, inter alia, advancing a catheter (4) in a blood vessel; pushing a wire body (e.g., 20) through the catheter, the wire body including a front end, a back end and a substantially straight section larger than a diameter of the blood

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vessel area; abutting a first wall portion of the blood vessel area, the wire body being substantially in an unloaded condition within the catheter; continuing to push the wire body out of a distal opening of the catheter, thereby by curving the section of the wire body toward a second wall portion of the blood vessel area, and frictionally locking the section to the first and second wall portions and forming a portion of the wire body that crosses the blood vessel area or a complexly curved shape without breakpoints, where the front end of the wire is curved in an unloaded condition at least 120 deg., and where the wire body is made of thread extending helically around a center line of the wire body and absent of occlusion hairs (see fig. 2B).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 2- 4, 6, 8, 12, 13, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiecki et al. (5,669,931). Kupiecki et al. disclose the invention

substantially as claimed. Kupiecki et al. disclose, at least in col. 4, line 51 to col. 5, line 16; a method for endovascular occlusion, where the front end of a body is formed as a spiral with a decreasing helix diameter in the direction of the front, and where a complexly curved shape of the wire body is formed within a vessel without a change in temperature of the wire body; but they do not specifically disclose occlusion of an aneurysm; retracting the catheter between the abutting and continuing steps, that the back end of the wire body is curved in an unloaded condition at least 120 deg. , that the section has a length of at least 20 mm or 90 mm, that the wire body has a spring constant as claimed, and that the wire body is dimensioned as claimed. However, Kupiecki et al. disclose, in col. 2, lines 22-28; devices similar to the invention and used for occluding aneurysms. It would have been obvious to one having ordinary skill in the art to apply the device of Kupiecki et al. in an aneurysm. An aneurysm is a vascular site with weakened walls, where the invention with its "extremely flexible" wire body and coils would be effective for occluding the aneurysm with a complexly curved shape of the wire body and for quickly forming emboli in the manner of the devices of Guglielmi et al. and Ritchart et al. as described by Kupiecki et al.

Kupiecki et al. also disclose, at least in col. 10, lines 42-54, that a plurality of wire bodies may be applied at a desired vascular site. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to retract the catheter between the abutting and continuing steps. Such a step would allow a surgeon to reposition the catheter, so that the catheter can deliver a plurality of wire

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bodies at a vascular site, and so that the catheter distal end does not interfere with the space-filling conformation of the wire bodies within the blood vessel area.

Kupiecki et al. disclose, at least in col. 4, line 62 to col. 5, line 5, that the wire body may have curves (i.e., helices) at the front end, along the entire length of the body, or spaced from the front end. Thus, it would have been a matter of obvious design choice to curve the back end of the wire body (at least 120 deg. as in the front end) in an unloaded condition. Such a modification (i.e., additional helices) would enhance the occlusion of vascular site to a desired degree with an additional mass of wire body material.

It also would be a matter of obvious design choice to size the section and the rest of the wire body as claimed, since such modifications would have involved mere changes in the size of a component. A change in size is generally recognized as being within the skill of ordinary skill in the art. Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the wire body, so that it has a spring constant as claimed, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges (e.g., of a spring constant) involves only routine skill in the art.

#### ***Response to Amendment***

6. Applicant's arguments filed on March 21, 2007 have been fully considered but are moot in view of the new grounds of rejection. The indication of allowable subject matter in claims 8 and 20 in the Office action of December 22, 2006 is hereby withdrawn in view of the new grounds of rejection.

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian W. Woo whose telephone number is (571) 272-4707. The examiner can normally be reached Mon.-Fri., 7:00 AM to 3:00 PM Eastern Time, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jackie Ho, can be reached on (571) 272-4696. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Julian W. Woo  
Primary Examiner

June 7, 2007